



**BOEING REALTY CORPORATION
FORMER C-6 FACILITY
LOS ANGELES, CALIFORNIA**

TECHNICAL MEMORANDUM

**STOCKPILE PLACEMENT/DISPOSITION EVALUATION
STOCKPILES SP-12 AND SP-14**

To: Mr. Brian Mossman
Boeing Realty Corporation
3855 Lakewood Blvd.
Building 1A MC D001-0097
Long Beach, CA 90846

From: Haley & Aldrich, Inc.

Date: August 1, 2001

Re: Stockpile Placement/Disposition Evaluation, Boeing Realty Corporation, Stockpiles SP-12 and SP-14, Former C-6 Facility – Parcel C, Los Angeles, California

Haley & Aldrich, Inc. is herein providing this technical memorandum to summarize our recommendations regarding the onsite placement and offsite transport of temporarily stockpiled excavated materials at Parcel C of the Boeing Realty Corporation's (BRC's) Former C-6 Facility in Los Angeles, California (subject parcel). These stockpiles are herein identified as Stockpiles SP-12 and SP-14.

OVERVIEW/PURPOSE

Potentially impacted materials identified during demolition monitoring activities have been excavated to expedite potential onsite remediation activities, thus, reducing the potential for affecting the current redevelopment schedule at the subject parcel. These materials were segregated by the location from which they were excavated and by known or suspected chemical impacts. Representative samples collected from these materials were evaluated using human health risk assessment and groundwater protection evaluation procedures to determine which of the temporary soil stockpiles could be reused onsite and which should be transported offsite to regulated treatment/disposal facilities. The evaluation methodology and the onsite placement/offsite transport recommendations are presented herein.

IDENTIFICATION OF STOCKPILED SOIL

Materials, comprised primarily of soils, were identified for excavation based on field observations and the results of in-situ samples collected and analyzed following the Los Angeles Regional Water Quality Control Board (LARWQCB)-approved sampling and analysis plan for the subject parcel and the subsequent LARWQCB-approved addendum and supplements.

Two temporary stockpiles (SP-12 and SP-14) have been generated from onsite excavations at the subject parcel. Each of these stockpiles is comprised of soil. Stockpile SP-12 contains approximately 1,050 cubic yards of soil, and has been divided into seven approximately equal segregated segments. Stockpile SP-14 contains approximately 250 cubic yards of soil.

STOCKPILE CHARACTERIZATION METHODOLOGY

One representative sample was obtained from each of the seven segments of stockpile SP-12 and two representative soil samples were obtained from stockpile SP-14 to characterize the associated stockpiled soil. Each of the samples collected from stockpiles SP-12 and SP-14 was tested for suspected chemical constituents following the protocols presented in the LARWQCB-approved sampling and analysis plan for the subject parcel and the subsequent LARWQCB-approved addendum and supplements.

STOCKPILE EVALUATION METHODOLOGY

The stockpile sample results were evaluated using screening human health risk assessment procedures as described in the November 29, 2000 Risk Assessment Work Plan (RAWP) for the subject parcel following the decision process summarized in Figure 1. In addition, maximum volatile organic compound (VOC) concentrations for each stockpile or stockpile segment was evaluated to assess whether VOC concentrations in the stockpiles have the potential to degrade existing groundwater quality.

Human Health Risk Evaluation

The maximum concentrations detected in each stockpile were separately added to the maximum concentrations detected within each of three areas of subject parcel. These three areas of the subject parcel are identified as the Building 1 Exposure Area, the Building 2 West Exposure Area, and the Parcel C Exposure Area (Figure 2). The Building 1 and 2 Exposure Areas are defined by two areas of elevated VOC impacts at and in proximity to former Buildings 1 and 2, respectively. The remaining portion of the subject parcel (Parcel C Exposure Area) contains relatively lower chemical concentrations and/or smaller impacted areas. The risk assessment results for each area were then compared to the LARWQCB- and Office of Environmental Health Hazard Assessment (OEHHA)-approved target risk levels.

Groundwater Protection Evaluation

Even though shallow groundwater beneath and in proximity to the subject parcel is not used as a domestic water supply, the evaluation conservatively assumed potential downward chemical migration from soil resulting in possible degradation of the Bellflower aquitard to levels greater than the California drinking water standards (i.e. Maximum Contaminant Levels [MCLs]). The assessment was conducted assuming a conservative scenario regarding chemical migration and mixing in groundwater following approved EPA and LARWQCB methodology and assumptions. This evaluation was conducted by comparing maximum VOC concentrations to site-specific soil screening levels (SSLs) derived from primary MCLs.

Initial site-specific SSLs were derived using the formula presented in Section 2.5 of the EPA document entitled *Soil Screening Guidance: Technical Background Document (TBD)*, dated July 1996, and site-specific geotechnical parameters. The EPA SSL equation is a partitioning formula, which does not account for chemical attenuation during migration in soil or mixing with groundwater. To better represent contaminant migration in the soil column, an attenuation factor of 13 was applied to the initial SSL. This attenuation factor was obtained from Table 5-14 of the LARWQCB's May 1996 *Interim Site Assessment & Cleanup Guidebook*, assuming site-specific average soil particle size distributions, and a distance of 53 feet from soil impacts to the groundwater table (i.e., stockpiled material to be placed onsite at a maximum depth of 12 feet below ground surface (bgs) or shallower, and the water table is located at a depth of 65 feet bgs). An EPA default dilution attenuation factor (DAF) of 20 was also applied to the initial SSL to account for limited groundwater mixing. This EPA default value is presented in the above-referenced July 1996 EPA document, and was used by EPA to develop generic SSLs. The resulting site-specific SSL is, thus, equal to the initial SSL (assuming no soil attenuation or groundwater mixing) multiplied by the product of a soil attenuation factor of 13 and a groundwater mixing factor of 20.

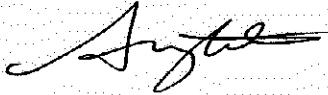
RECOMMENDATIONS

The recommendation for onsite reuse of each stockpile is based on whether the target risk levels of the area of the subject parcel are exceeded after addition of the maximum concentrations detected in that stockpile and on whether maximum VOC concentrations may degrade groundwater quality to concentrations greater than MCLs. If the estimated risk remains below the target risk levels for that area of the subject parcel and VOC concentrations would not degrade groundwater quality to concentrations greater than MCLs, it is recommended that the stockpile be reused in that area of the subject parcel. If the estimated risk is greater than a target risk level or if VOC concentrations may degrade groundwater quality to concentrations greater than MCLs, it is recommended that the stockpile be transported offsite at a regulated treatment/disposal facility.

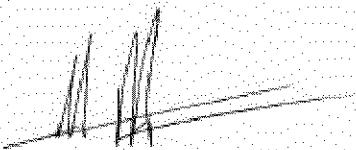
A summary of the recommendations for the stockpiles is presented in Table 1. The laboratory data for the stockpile samples is presented in Appendix A, and the SSL calculations are presented in Appendix B.

Should you have any questions concerning the contents of this memorandum or require additional information, please contact either of the undersigned.

Sincerely yours,
HALEY & ALDRICH, INC.



Anita Broughton, REA, CIH
Risk Assessment Task Manager



Richard M. Farson, PE
Senior Engineer

Attachments:

- Figure 1 Soil Stockpile Reuse Protocol
- Figure 2 Parcel C Exposure Areas
- Table 1 Recommendations for Stockpiles SP-12 and SP-14
- Appendix A Compact Disc of Laboratory Reports
- Appendix B Soil Screening Level (SSL) Calculations

FORMER C-6 FACILITY

SOIL STOCKPILE RE-USE PROTOCOL

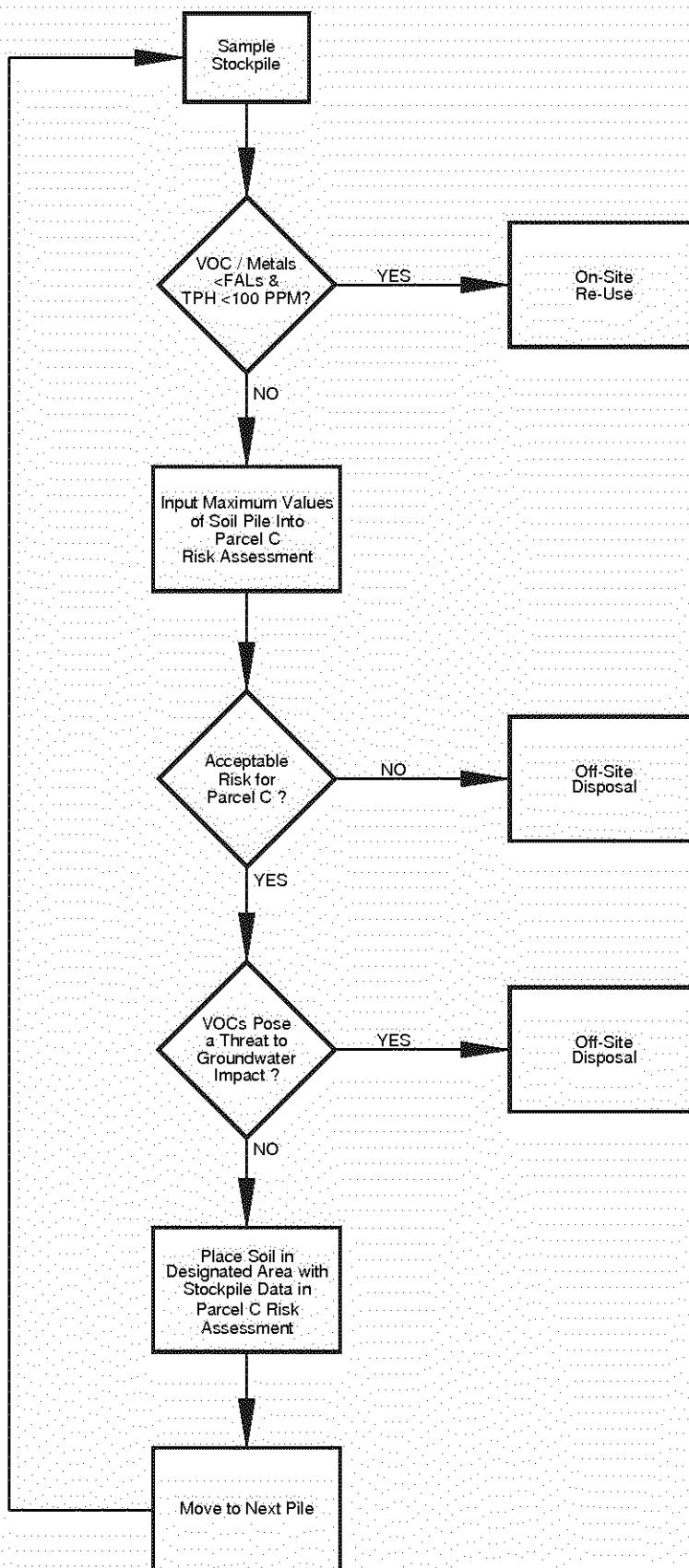
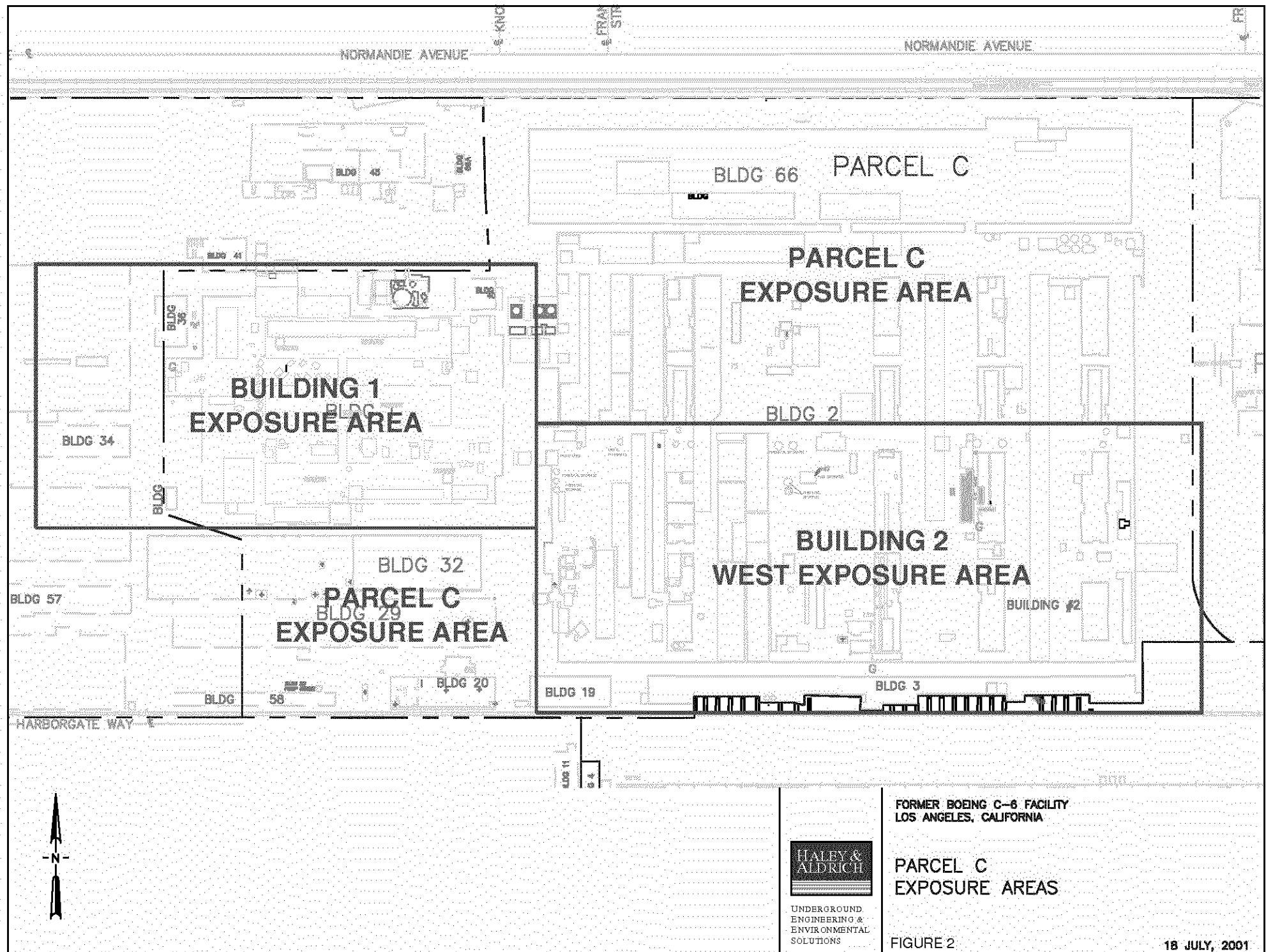


FIGURE 1



**FORMER BOEING C-6 FACILITY
LOS ANGELES, CALIFORNIA**



UNDERGROUND
ENGINEERING &
ENVIRONMENTAL
SOLUTIONS

**PARCEL C
EXPOSURE AREAS**

FIGURE 2

18 JULY 2001

BOE-C6-0000873

Table 1
Recommendations for Stockpiles SP-12 and SP-14
BRC Former C-6 Facility, Los Angeles, California

Stockpile No.	Sample IDs	Approx. Volume	Analyses	Acceptable for Onsite Reuse? (Yes or No)	Restrictions on Parcel C Placement?	Recommendations
SP-12A/H	SP_12H@1.2	~ 150 cy	VOCs, SVOCs, TPH	Yes	None	Acceptable for reuse in any portion of Parcel C. Addition of VOC and SVOC concentrations result in health risk below target risk levels, and detected VOCs do not pose a threat to groundwater quality at levels greater than MCLs.
SP-12B/I	SP_12B@1.5	~ 150 cy	VOCs, SVOCs, TPH	Yes	None	Acceptable for reuse in any portion of Parcel C. Addition of VOC and SVOC concentrations result in health risk below target risk levels, and detected VOCs do not pose a threat to groundwater quality at levels greater than MCLs.
SP-12C/J	SP_12J@1.5	~ 150 cy	VOCs, SVOCs, TPH, Metals, PCBs	No	NA	Not acceptable for onsite reuse due to elevated VOC results. Treat/dispose of offsite at a regulated facility.
SP-12D/K	SP_12D@2	~ 150 cy	VOCs, SVOCs, TPH, Metals, PCBs	No	NA	Not acceptable for onsite reuse due to elevated VOC results. Treat/dispose of offsite at a regulated facility.
SP-12E/L	SP_12L@1.5	~ 150 cy	VOCs, SVOCs, TPH	Yes	None	Acceptable for reuse in any portion of Parcel C. Addition of VOC and SVOC concentrations result in health risk below target risk levels, and detected VOCs do not pose a threat to groundwater quality at levels greater than MCLs.
SP-12F/M	SP_12F@1	~ 150 cy	VOCs, SVOCs, TPH	Yes	Not acceptable for placement outside of the Building 1 area	Acceptable for reuse in Building 1 area only. Addition of VOC and PAH concentrations result in health risk below target risk levels, and detected VOCs do not pose a threat to groundwater quality at levels greater than MCLs.
SP-12G/N	SP_12N@1	~ 150 cy	VOCs, SVOCs, TPH	Yes	Not acceptable for placement outside of the Building 1 area	Acceptable for reuse in Building 1 area only. Addition of VOC and PAH concentrations result in health risk below target risk levels, and detected VOCs do not pose a threat to groundwater quality at levels greater than MCLs.

Table 1
Recommendations for Stockpiles SP-12 and SP-14
BRCA Former C-6 Facility, Los Angeles, California

SP-14	SP_14_071901_6", SP_14_071901_1'	~ 250 cy	VOCs, SVOCs, PAHs, TPH	No	NA	Not acceptable for onsite reuse due to elevated PAH results. Treat/dispose of offsite at a regulated facility.
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cy = cubic yards

NA = Not Applicable

PAH risk drivers include benzo(a)pyrene and dibenzo(a,h)anthracene.

APPENDIX A
LABORATORY REPORTS

LABORATORY REPORT

Prepared For: STL Los Angeles
1721 S. Grand Avenue
Santa Ana, CA 92705

Attention: Diane Suzuki
Project: EIG180296

Sampled: 07/18/01
Received: 07/18/01
Reported: 07/24/01

*This laboratory report is confidential and is intended for the sole use of
Del Mar Analytical and its client. This entire report was reviewed and approved for release.*

CA ELAP Certificate #1169
AZ DHS License #AZ0062


Del Mar Analytical, Colton
Clifton J. Kiser
Project Manager

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CKG0185 <Page 1 of 8>

STL Los Angeles
1721 S. Grand Avenue
Santa Ana, CA 92705
Attention: Diane Suzuki

Client Project ID: EIG180296

Report Number: CKG0185

Sampled:07/18/01
Received:07/18/01

POLYNUCLEAR AROMATIC HYDROCARBONS (EPA 8310)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
				ug/kg	ug/kg			
Sample ID: CKG0185-01 (SP_12J@1.5 - Soil)								
cenaphthene	EPA 8310	C1G2312	10000	ND	200	7/23/01	7/23/01	
cenaphthylene	EPA 8310	C1G2312	40000	ND	200	7/23/01	7/23/01	
n thracene	EPA 8310	C1G2312	400	200	200	7/23/01	7/23/01	J
enzo(a)anthracene	EPA 8310	C1G2312	400	ND	200	7/23/01	7/23/01	
enzo(a)pyrene	EPA 8310	C1G2312	400	210	200	7/23/01	7/23/01	L2,J
enzo(b)fluoranthene	EPA 8310	C1G2312	1000	440	200	7/23/01	7/23/01	J
enzo(g,h,i)perylene	EPA 8310	C1G2312	1000	170	200	7/23/01	7/23/01	J
enzo(k)fluoranthene	EPA 8310	C1G2312	400	ND	200	7/23/01	7/23/01	
hrysene	EPA 8310	C1G2312	1000	ND	200	7/23/01	7/23/01	
i benzo(a,h)anthracene	EPA 8310	C1G2312	1000	230	200	7/23/01	7/23/01	J
luoranthene	EPA 8310	C1G2312	1000	3400	200	7/23/01	7/23/01	
luorene	EPA 8310	C1G2312	1000	2200	200	7/23/01	7/23/01	
i deno(1,2,3-cd)pyrene	EPA 8310	C1G2312	1000	130	200	7/23/01	7/23/01	J
aphthalene	EPA 8310	C1G2312	8000	2100	200	7/23/01	7/23/01	J
henanthrene	EPA 8310	C1G2312	1000	7500	200	7/23/01	7/23/01	
yrene	EPA 8310	C1G2312	1000	120	200	7/23/01	7/23/01	J
Surrogate: 2-Methylanthracene (35-115%)								Z3
Sample ID: CKG0185-02 (SP_12H@1.2 - Soil)								
cenaphthene	EPA 8310	C1G2312	5000	ND	100	7/23/01	7/23/01	
cenaphthylene	EPA 8310	C1G2312	20000	ND	100	7/23/01	7/23/01	
n thracene	EPA 8310	C1G2312	200	140	100	7/23/01	7/23/01	J
enzo(a)anthracene	EPA 8310	C1G2312	200	ND	100	7/23/01	7/23/01	
enzo(a)pyrene	EPA 8310	C1G2312	200	130	100	7/23/01	7/23/01	L2,J
enzo(b)fluoranthene	EPA 8310	C1G2312	500	100	100	7/23/01	7/23/01	J
enzo(g,h,i)perylene	EPA 8310	C1G2312	500	90	100	7/23/01	7/23/01	J
enzo(k)fluoranthene	EPA 8310	C1G2312	200	ND	100	7/23/01	7/23/01	
hrysene	EPA 8310	C1G2312	500	ND	100	7/23/01	7/23/01	
i benzo(a,h)anthracene	EPA 8310	C1G2312	500	700	100	7/23/01	7/23/01	
luoranthene	EPA 8310	C1G2312	500	2500	100	7/23/01	7/23/01	
luorene	EPA 8310	C1G2312	500	1800	100	7/23/01	7/23/01	
i deno(1,2,3-cd)pyrene	EPA 8310	C1G2312	500	120	100	7/23/01	7/23/01	J
aphthalene	EPA 8310	C1G2312	4000	880	100	7/23/01	7/23/01	J
henanthrene	EPA 8310	C1G2312	500	5600	100	7/23/01	7/23/01	
yrene	EPA 8310	C1G2312	500	42	100	7/23/01	7/23/01	J
Surrogate: 2-Methylanthracene (35-115%)								Z3

Del Mar Analytical, Colton
Lifton J. Kiser
Project Manager

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CKG0185 Page 2 of 8

STL Los Angeles
1721 S. Grand Avenue
Santa Ana, CA 92705
Attention: Diane Suzuki

Client Project ID: EIG180296

Report Number: CKG0185

Sampled:07/18/01
Received:07/18/01

POLYNUCLEAR AROMATIC HYDROCARBONS (EPA 8310)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
				ug/kg		ug/kg		
Sample ID: CKG0185-03 (SP_12N@1 - Soil)								
cenaphthene	EPA 8310	C1G2312	5000	ND	100	7/23/01	7/23/01	
cenaphthylene	EPA 8310	C1G2312	20000	ND	100	7/23/01	7/23/01	
n thracene	EPA 8310	C1G2312	200	140	100	7/23/01	7/23/01	J
enzo(a)anthracene	EPA 8310	C1G2312	200	ND	100	7/23/01	7/23/01	
enzo(a)pyrene	EPA 8310	C1G2312	200	160	100	7/23/01	7/23/01	L2,J
enzo(b)fluoranthene	EPA 8310	C1G2312	500	130	100	7/23/01	7/23/01	J
enzo(g,h,i)perylene	EPA 8310	C1G2312	500	110	100	7/23/01	7/23/01	J
enzo(k)fluoranthene	EPA 8310	C1G2312	200	ND	100	7/23/01	7/23/01	
hrysene	EPA 8310	C1G2312	500	ND	100	7/23/01	7/23/01	
ibenzo(a,h)anthracene	EPA 8310	C1G2312	500	ND	100	7/23/01	7/23/01	
luoranthene	EPA 8310	C1G2312	500	2300	100	7/23/01	7/23/01	
luorene	EPA 8310	C1G2312	500	1600	100	7/23/01	7/23/01	
ideno(1,2,3-cd)pyrene	EPA 8310	C1G2312	500	98	100	7/23/01	7/23/01	J
aphthalene	EPA 8310	C1G2312	4000	860	100	7/23/01	7/23/01	J
henanthrene	EPA 8310	C1G2312	500	4900	100	7/23/01	7/23/01	
yrene	EPA 8310	C1G2312	500	59	100	7/23/01	7/23/01	J
Surrogate: 2-Methylanthracene (35-115%)						2980 %		Z3
Sample ID: CKG0185-04 (SP_12L@1.5 - Soil)								
cenaphthene	EPA 8310	C1G2312	10000	ND	200	7/23/01	7/23/01	
cenaphthylene	EPA 8310	C1G2312	40000	ND	200	7/23/01	7/23/01	
n thracene	EPA 8310	C1G2312	400	170	200	7/23/01	7/23/01	J
enzo(a)anthracene	EPA 8310	C1G2312	400	ND	200	7/23/01	7/23/01	
enzo(a)pyrene	EPA 8310	C1G2312	400	120	200	7/23/01	7/23/01	L2,J
enzo(b)fluoranthene	EPA 8310	C1G2312	1000	220	200	7/23/01	7/23/01	J
enzo(g,h,i)perylene	EPA 8310	C1G2312	1000	91	200	7/23/01	7/23/01	J
enzo(k)fluoranthene	EPA 8310	C1G2312	400	150	200	7/23/01	7/23/01	J
hrysene	EPA 8310	C1G2312	1000	ND	200	7/23/01	7/23/01	
ibenzo(a,h)anthracene	EPA 8310	C1G2312	1000	490	200	7/23/01	7/23/01	J
luoranthene	EPA 8310	C1G2312	1000	3100	200	7/23/01	7/23/01	
luorene	EPA 8310	C1G2312	1000	2500	200	7/23/01	7/23/01	
ideno(1,2,3-cd)pyrene	EPA 8310	C1G2312	1000	180	200	7/23/01	7/23/01	J
aphthalene	EPA 8310	C1G2312	8000	1200	200	7/23/01	7/23/01	J
henanthrene	EPA 8310	C1G2312	1000	7800	200	7/23/01	7/23/01	
yrene	EPA 8310	C1G2312	1000	ND	200	7/23/01	7/23/01	
Surrogate: 2-Methylanthracene (35-115%)						3350 %		Z3

Del Mar Analytical, Colton
Clifton J. Kiser
Project Manager

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STL Los Angeles
1721 S. Grand Avenue
Santa Ana, CA 92705
Attention: Diane Suzuki

Client Project ID: EIG180296

Report Number: CKG0185

Sampled:07/18/01
Received:07/18/01

POLYNUCLEAR AROMATIC HYDROCARBONS (EPA 8310)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
			ug/kg	ug/kg				
Sample ID: CKG0185-05 (SP_12D@2 - Soil)								
cenaphthene	EPA 8310	C1G2312	10000	ND	200	7/23/01	7/23/01	
cenaphthylene	EPA 8310	C1G2312	40000	ND	200	7/23/01	7/23/01	
n thracene	EPA 8310	C1G2312	400	200	200	7/23/01	7/23/01	J
enzo(a)anthracene	EPA 8310	C1G2312	400	ND	200	7/23/01	7/23/01	
enzo(a)pyrene	EPA 8310	C1G2312	400	250	200	7/23/01	7/23/01	L2,J
enzo(b)fluoranthene	EPA 8310	C1G2312	1000	570	200	7/23/01	7/23/01	J
enzo(g,h,i)perylene	EPA 8310	C1G2312	1000	200	200	7/23/01	7/23/01	J
enzo(k)fluoranthene	EPA 8310	C1G2312	400	ND	200	7/23/01	7/23/01	
hrysene	EPA 8310	C1G2312	1000	ND	200	7/23/01	7/23/01	
i bzeno(a,h)anthracene	EPA 8310	C1G2312	1000	210	200	7/23/01	7/23/01	J
luoranthene	EPA 8310	C1G2312	1000	1900	200	7/23/01	7/23/01	
luorene	EPA 8310	C1G2312	1000	850	200	7/23/01	7/23/01	J
i deno(1,2,3-cd)pyrene	EPA 8310	C1G2312	1000	85	200	7/23/01	7/23/01	J
aphthalene	EPA 8310	C1G2312	8000	1100	200	7/23/01	7/23/01	J
henanthrene	EPA 8310	C1G2312	1000	3600	200	7/23/01	7/23/01	
yrene	EPA 8310	C1G2312	1000	210	200	7/23/01	7/23/01	J
Surrogate: 2-Methylanthracene (35-115%)						4380 %		Z3
Sample ID: CKG0185-06 (SP_12F@12 - Soil)								
cenaphthene	EPA 8310	C1G2312	12000	ND	250	7/23/01	7/23/01	
cenaphthylene	EPA 8310	C1G2312	50000	ND	250	7/23/01	7/23/01	
n thracene	EPA 8310	C1G2312	500	270	250	7/23/01	7/23/01	J
enzo(a)anthracene	EPA 8310	C1G2312	500	ND	250	7/23/01	7/23/01	
enzo(a)pyrene	EPA 8310	C1G2312	500	350	250	7/23/01	7/23/01	L2,J
enzo(b)fluoranthene	EPA 8310	C1G2312	1200	740	250	7/23/01	7/23/01	J
enzo(g,h,i)perylene	EPA 8310	C1G2312	1200	280	250	7/23/01	7/23/01	J
enzo(k)fluoranthene	EPA 8310	C1G2312	500	ND	250	7/23/01	7/23/01	
hrysene	EPA 8310	C1G2312	1200	ND	250	7/23/01	7/23/01	
i bzeno(a,h)anthracene	EPA 8310	C1G2312	1200	360	250	7/23/01	7/23/01	J
luoranthene	EPA 8310	C1G2312	1200	4600	250	7/23/01	7/23/01	
luorene	EPA 8310	C1G2312	1200	3300	250	7/23/01	7/23/01	
i deno(1,2,3-cd)pyrene	EPA 8310	C1G2312	1200	170	250	7/23/01	7/23/01	J
aphthalene	EPA 8310	C1G2312	10000	2300	250	7/23/01	7/23/01	J
henanthrene	EPA 8310	C1G2312	1200	6800	250	7/23/01	7/23/01	
yrene	EPA 8310	C1G2312	1200	220	250	7/23/01	7/23/01	J
Surrogate: 2-Methylanthracene (35-115%)						5890 %		Z3

Del Mar Analytical, Colton
Lifton J. Kiser
Project Manager

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STL Los Angeles
 1721 S. Grand Avenue
 Santa Ana, CA 92705
 Attention: Diane Suzuki

Client Project ID: EIG180296

Report Number: CKG0185

Sampled:07/18/01
 Received:07/18/01

POLYNUCLEAR AROMATIC HYDROCARBONS (EPA 8310)

Analyte	Method	Batch	Reporting	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
			Limit			ug/kg	ug/kg	
Sample ID: CKG0185-07 (SP_12B@1.5 - Soil)								
cenaphthene	EPA 8310	C1G2312	10000	ND	200	7/23/01	7/23/01	
cenaphthylene	EPA 8310	C1G2312	40000	ND	200	7/23/01	7/23/01	
n thracene	EPA 8310	C1G2312	400	150	200	7/23/01	7/23/01	J
enzo(a)anthracene	EPA 8310	C1G2312	400	ND	200	7/23/01	7/23/01	
enzo(a)pyrene	EPA 8310	C1G2312	400	85	200	7/23/01	7/23/01	L2,J
enzo(b)fluoranthene	EPA 8310	C1G2312	1000	61	200	7/23/01	7/23/01	J
enzo(g,h,i)perylene	EPA 8310	C1G2312	1000	64	200	7/23/01	7/23/01	J
enzo(k)fluoranthene	EPA 8310	C1G2312	400	ND	200	7/23/01	7/23/01	
hrysene	EPA 8310	C1G2312	1000	ND	200	7/23/01	7/23/01	
i	EPA 8310	C1G2312	1000	ND	200	7/23/01	7/23/01	
luoranthene	EPA 8310	C1G2312	1000	3000	200	7/23/01	7/23/01	
luorene	EPA 8310	C1G2312	1000	1100	200	7/23/01	7/23/01	
ideno(1,2,3-cd)pyrene	EPA 8310	C1G2312	1000	150	200	7/23/01	7/23/01	J
aphthalene	EPA 8310	C1G2312	8000	1200	200	7/23/01	7/23/01	J
henanthrene	EPA 8310	C1G2312	1000	7200	200	7/23/01	7/23/01	
yrene	EPA 8310	C1G2312	1000	140	200	7/23/01	7/23/01	J
<i>Surrogate: 2-Methylanthracene (35-115%)</i>						3080 %		Z3

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CKG0185 - Page 5 of 8

STL Los Angeles
 1721 S. Grand Avenue
 Santa Ana, CA 92705
 Attention: Diane Suzuki

Client Project ID: EIG180296

Report Number: CKG0185

Sampled:07/18/01
 Received:07/18/01

METHOD BLANK/QC DATA

POLYNUCLEAR AROMATIC HYDROCARBONS (EPA 8310)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
---------	--------	-----------------	-------	-------------	---------------	-----------	-------------	---------	-----------	-----------------

Batch: C1G2312 Extracted: 07/23/01

Blank Analyzed: 07/23/01 (C1G2312-BLK1)

cenaphthene	6.90	50	ug/kg							J
cenaphthylene	132	200	ug/kg							J
nthracene	ND	2.0	ug/kg							
enzo(a)anthracene	ND	2.0	ug/kg							
enzo(a)pyrene	ND	2.0	ug/kg							
enzo(b)fluoranthene	ND	5.0	ug/kg							
enzo(g,h,i)perylene	ND	5.0	ug/kg							
enzo(k)fluoranthene	ND	2.0	ug/kg							
hrysene	ND	5.0	ug/kg							
ibenzo(a,h)anthracene	ND	5.0	ug/kg							
luoranthene	ND	5.0	ug/kg							
luorene	0.848	5.0	ug/kg							J
ideno(1,2,3-cd)pyrene	ND	5.0	ug/kg							
aphthalene	21.5	40	ug/kg							J
henanthrene	0.290	5.0	ug/kg							J
yrene	ND	5.0	ug/kg							
<i>Surrogate: 2-Methylanthracene</i>	4.71		ug/kg	8.00		58.9	35-115			

CS Analyzed: 07/24/01 (C1G2312-BS1)

cenaphthene	51.7	50	ug/kg	80.0	64.6	45-115				
cenaphthylene	176	200	ug/kg	160	110	50-115				J
nthracene	5.96	2.0	ug/kg	8.00	74.5	55-115				
enzo(a)anthracene	6.94	2.0	ug/kg	8.00	86.8	65-115				
enzo(a)pyrene	5.22	2.0	ug/kg	8.00	65.2	55-115				
enzo(b)fluoranthene	14.2	5.0	ug/kg	16.0	88.8	65-115				
enzo(g,h,i)perylene	13.2	5.0	ug/kg	16.0	82.5	60-115				
enzo(k)fluoranthene	6.90	2.0	ug/kg	8.00	86.2	65-115				
hrysene	6.78	5.0	ug/kg	8.00	84.8	65-115				
ibenzo(a,h)anthracene	13.9	5.0	ug/kg	16.0	86.9	60-115				
luoranthene	13.9	5.0	ug/kg	16.0	86.9	65-115				
luorene	11.0	5.0	ug/kg	16.0	68.8	55-115				
ideno(1,2,3-cd)pyrene	6.82	5.0	ug/kg	8.00	85.2	55-115				
aphthalene	70.4	40	ug/kg	80.0	88.0	45-115				
henanthrene	6.77	5.0	ug/kg	8.00	84.6	55-120				
yrene	6.45	5.0	ug/kg	8.00	80.6	55-115				

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STL Los Angeles
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Client Project ID: EIG180296

Report Number: CKG0185

Sampled:07/18/01
 Received:07/18/01

METHOD BLANK/QC DATA

POLYNUCLEAR AROMATIC HYDROCARBONS (EPA 8310)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<u>Batch: C1G2312 Extracted: 07/23/01</u>										
CS Analyzed: 07/24/01 (C1G2312-BS1)										
<i>Surrogate: 2-Methylanthracene</i> 5.43										
cenaphthene	43.5	50	ug/kg	8.00		67.9	35-115			J
cenaphthylene	179	200	ug/kg	160		112	50-115	1.69	25	J
nthracene	4.86	2.0	ug/kg	8.00		60.8	55-115	20.3	25	
enzo(a)anthracene	6.14	2.0	ug/kg	8.00		76.8	65-115	12.2	20	
enzo(a)pyrene	4.31	2.0	ug/kg	8.00		53.9	55-115	19.1	20	L2
enzo(b)fluoranthene	12.4	5.0	ug/kg	16.0		77.5	65-115	13.5	20	
enzo(g,h,i)perylene	12.0	5.0	ug/kg	16.0		75.0	60-115	9.52	20	
enzo(k)fluoranthene	6.14	2.0	ug/kg	8.00		76.8	65-115	11.7	20	
hrysene	6.12	5.0	ug/kg	8.00		76.5	65-115	10.2	20	
ibenzo(a,h)anthracene	12.4	5.0	ug/kg	16.0		77.5	60-115	11.4	20	
luoranthene	12.3	5.0	ug/kg	16.0		76.9	65-115	12.2	30	
luorene	9.57	5.0	ug/kg	16.0		59.8	55-115	13.9	20	
ideno(1,2,3-cd)pyrene	5.91	5.0	ug/kg	8.00		73.9	55-115	14.3	20	
aphthalene	66.8	40	ug/kg	80.0		83.5	45-115	5.25	25	
henanthrene	5.92	5.0	ug/kg	8.00		74.0	55-120	13.4	30	
yrene	5.89	5.0	ug/kg	8.00		73.6	55-115	9.08	20	
<i>Surrogate: 2-Methylanthracene</i> 4.21										
			ug/kg	8.00		52.6	35-115			

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 Project Manager

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STL Los Angeles
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Santa Ana, CA 92705
Attention: Diane Suzuki

Client Project ID: EIG180296
Report Number: CKG0185

Sampled:07/18/01
Received:07/18/01

DATA QUALIFIERS AND DEFINITIONS

- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of unknown quality.
- L2** Laboratory Control Sample recovery was below method control limits. See Corrective Action Report.
- Z3** The sample required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- NR** Not reported.
- RPD** Relative Percent Difference

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CKG0185 - Page 8 of 8

LABORATORY REPORT

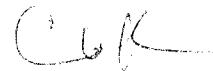
Prepared For: STL Los Angeles
1721 S. Grand Avenue
Santa Ana, CA 92705

Attention: Diane Suzuki
Project: EIG190292

Sampled: 07/19/01
Received: 07/20/01
Reported: 07/24/01

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CKG0200 <Page 1 of 5>

STL Los Angeles
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 Santa Ana, CA 92705
 Attention: Diane Suzuki

Client Project ID: EIG190292

Report Number: CKG0200

Sampled:07/19/01
 Received:07/20/01

POLYNUCLEAR AROMATIC HYDROCARBONS (EPA 8310)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
			ug/kg	ug/kg				
Sample ID: CKG0200-01 (SP_14_071901_6 - Soil)								
cenaphthene	EPA 8310	C1G2312	10000	ND	200	7/23/01	7/23/01	
cenaphthylene	EPA 8310	C1G2312	40000	ND	200	7/23/01	7/23/01	
n thracene	EPA 8310	C1G2312	400	120	200	7/23/01	7/23/01	J
enzo(a)anthracene	EPA 8310	C1G2312	400	ND	200	7/23/01	7/23/01	
enzo(a)pyrene	EPA 8310	C1G2312	400	75	200	7/23/01	7/23/01	L2,J
enzo(b)fluoranthene	EPA 8310	C1G2312	1000	200	200	7/23/01	7/23/01	J
enzo(g,h,i)perylene	EPA 8310	C1G2312	1000	69	200	7/23/01	7/23/01	J
enzo(k)fluoranthene	EPA 8310	C1G2312	400	ND	200	7/23/01	7/23/01	
hrysene	EPA 8310	C1G2312	1000	ND	200	7/23/01	7/23/01	
ibenzo(a,h)anthracene	EPA 8310	C1G2312	1000	ND	200	7/23/01	7/23/01	
luoranthene	EPA 8310	C1G2312	1000	3100	200	7/23/01	7/23/01	
luorene	EPA 8310	C1G2312	1000	2400	200	7/23/01	7/23/01	
ideno(1,2,3-cd)pyrene	EPA 8310	C1G2312	1000	160	200	7/23/01	7/23/01	J
aphthalene	EPA 8310	C1G2312	8000	3400	200	7/23/01	7/23/01	J
henanthrene	EPA 8310	C1G2312	1000	8000	200	7/23/01	7/23/01	
yrene	EPA 8310	C1G2312	1000	200	200	7/23/01	7/23/01	J
Surrogate: 2-Methylanthracene (35-115%)								Z3
Sample ID: CKG0200-02 (SP_14_071901_1 - Soil)								
cenaphthene	EPA 8310	C1G2312	20000	ND	400	7/23/01	7/23/01	
cenaphthylene	EPA 8310	C1G2312	80000	ND	400	7/23/01	7/23/01	
n thracene	EPA 8310	C1G2312	800	240	400	7/23/01	7/23/01	J
enzo(a)anthracene	EPA 8310	C1G2312	800	ND	400	7/23/01	7/23/01	
enzo(a)pyrene	EPA 8310	C1G2312	800	300	400	7/23/01	7/23/01	L2,J
enzo(b)fluoranthene	EPA 8310	C1G2312	2000	270	400	7/23/01	7/23/01	J
enzo(g,h,i)perylene	EPA 8310	C1G2312	2000	230	400	7/23/01	7/23/01	J
enzo(k)fluoranthene	EPA 8310	C1G2312	800	ND	400	7/23/01	7/23/01	
hrysene	EPA 8310	C1G2312	2000	ND	400	7/23/01	7/23/01	
ibenzo(a,h)anthracene	EPA 8310	C1G2312	2000	ND	400	7/23/01	7/23/01	
luoranthene	EPA 8310	C1G2312	2000	4300	400	7/23/01	7/23/01	
luorene	EPA 8310	C1G2312	2000	2400	400	7/23/01	7/23/01	
ideno(1,2,3-cd)pyrene	EPA 8310	C1G2312	2000	160	400	7/23/01	7/23/01	J
aphthalene	EPA 8310	C1G2312	16000	4900	400	7/23/01	7/23/01	J
henanthrene	EPA 8310	C1G2312	2000	9200	400	7/23/01	7/23/01	
yrene	EPA 8310	C1G2312	2000	260	400	7/23/01	7/23/01	J
Surrogate: 2-Methylanthracene (35-115%)								Z3

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 Project Manager

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STL Los Angeles
1721 S. Grand Avenue
Santa Ana, CA 92705
Attention: Diane Suzuki

Client Project ID: EIG190292

Report Number: CKG0200

Sampled:07/19/01

Received:07/20/01

METHOD BLANK/QC DATA

POLYNUCLEAR AROMATIC HYDROCARBONS (EPA 8310)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
---------	--------	-----------------	-------	-------------	---------------	-----------	-------------	---------	-----------	-----------------

Batch: C1G2312 Extracted: 07/23/01

Blank Analyzed: 07/23/01 (C1G2312-BLK1)

cenaphthene	6.90	50	ug/kg							J
cenaphthylene	132	200	ug/kg							J
nthracene	ND	2.0	ug/kg							
enzo(a)anthracene	ND	2.0	ug/kg							
enzo(a)pyrene	ND	2.0	ug/kg							
enzo(b)fluoranthene	ND	5.0	ug/kg							
enzo(g,h,i)perylene	ND	5.0	ug/kg							
enzo(k)fluoranthene	ND	2.0	ug/kg							
hrysene	ND	5.0	ug/kg							
ibenzo(a,h)anthracene	ND	5.0	ug/kg							
luoranthene	ND	5.0	ug/kg							
luorene	0.848	5.0	ug/kg							J
ideno(1,2,3-cd)pyrene	ND	5.0	ug/kg							
aphthalene	21.5	40	ug/kg							J
henanthrene	0.290	5.0	ug/kg							J
yrene	ND	5.0	ug/kg							
surrogate: 2-Methylanthracene	4.71		ug/kg	8.00		58.9	35-115			

CS Analyzed: 07/24/01 (C1G2312-BS1)

cenaphthene	51.7	50	ug/kg	80.0		64.6	45-115			
cenaphthylene	176	200	ug/kg	160		110	50-115			J
nthracene	5.96	2.0	ug/kg	8.00		74.5	55-115			
enzo(a)anthracene	6.94	2.0	ug/kg	8.00		86.8	65-115			
enzo(a)pyrene	5.22	2.0	ug/kg	8.00		65.2	55-115			
enzo(b)fluoranthene	14.2	5.0	ug/kg	16.0		88.8	65-115			
enzo(g,h,i)perylene	13.2	5.0	ug/kg	16.0		82.5	60-115			
enzo(k)fluoranthene	6.90	2.0	ug/kg	8.00		86.2	65-115			
hrysene	6.78	5.0	ug/kg	8.00		84.8	65-115			
ibenzo(a,h)anthracene	13.9	5.0	ug/kg	16.0		86.9	60-115			
luoranthene	13.9	5.0	ug/kg	16.0		86.9	65-115			
luorene	11.0	5.0	ug/kg	16.0		68.8	55-115			
ideno(1,2,3-cd)pyrene	6.82	5.0	ug/kg	8.00		85.2	55-115			
aphthalene	70.4	40	ug/kg	80.0		88.0	45-115			
henanthrene	6.77	5.0	ug/kg	8.00		84.6	55-120			
yrene	6.45	5.0	ug/kg	8.00		80.6	55-115			

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Client Project ID: EIG190292

Report Number: CKG0200

Sampled:07/19/01
 Received:07/20/01

METHOD BLANK/QC DATA

POLYNUCLEAR AROMATIC HYDROCARBONS (EPA 8310)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<u>Batch: C1G2312 Extracted: 07/23/01</u>										
CS Analyzed: 07/24/01 (C1G2312-BS1)										
<i>Surrogate: 2-Methylanthracene</i> 5.43										
cenaphthene	43.5	50	ug/kg	8.00		67.9	35-115			J
cenaphthylene	179	200	ug/kg	160		112	50-115	1.69	25	J
nthracene	4.86	2.0	ug/kg	8.00		60.8	55-115	20.3	25	
enzo(a)anthracene	6.14	2.0	ug/kg	8.00		76.8	65-115	12.2	20	
enzo(a)pyrene	4.31	2.0	ug/kg	8.00		53.9	55-115	19.1	20	L2
enzo(b)fluoranthene	12.4	5.0	ug/kg	16.0		77.5	65-115	13.5	20	
enzo(g,h,i)perylene	12.0	5.0	ug/kg	16.0		75.0	60-115	9.52	20	
enzo(k)fluoranthene	6.14	2.0	ug/kg	8.00		76.8	65-115	11.7	20	
hrysene	6.12	5.0	ug/kg	8.00		76.5	65-115	10.2	20	
ibenzo(a,h)anthracene	12.4	5.0	ug/kg	16.0		77.5	60-115	11.4	20	
uoranthene	12.3	5.0	ug/kg	16.0		76.9	65-115	12.2	30	
uorene	9.57	5.0	ug/kg	16.0		59.8	55-115	13.9	20	
deno(1,2,3-cd)pyrene	5.91	5.0	ug/kg	8.00		73.9	55-115	14.3	20	
aphthalene	66.8	40	ug/kg	80.0		83.5	45-115	5.25	25	
nenanthrene	5.92	5.0	ug/kg	8.00		74.0	55-120	13.4	30	
rene	5.89	5.0	ug/kg	8.00		73.6	55-115	9.08	20	
<i>Surrogate: 2-Methylanthracene</i> 4.21										
			ug/kg	8.00		52.6	35-115			

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 Project Manager

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STL Los Angeles
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Santa Ana, CA 92705
Attention: Diane Suzuki

Client Project ID: EIG190292

Report Number: CKG0200

Sampled:07/19/01

Received:07/20/01

DATA QUALIFIERS AND DEFINITIONS

- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of unknown quality.
- L2** Laboratory Control Sample recovery was below method control limits. See Corrective Action Report.
- Z3** The sample required a dilution due to the nature of the sample matrix. Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- NR** Not reported.
- RPD** Relative Percent Difference

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Project Manager

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APPENDIX B
SOIL SCREENING LEVEL (SSL) CALCULATIONS

Site-specific Soil screening Levels (SSLs) Assuming Impacts at Depths of 12 Feet bgs

CAS No.	Chemical	MCL (mg/L)	K _{oc} ^(1,2)	f _{oc} ⁽³⁾	K _d ⁽⁴⁾	H' ⁽¹⁾	O _w ⁽³⁾	O _a ⁽³⁾	P _b ⁽³⁾	AF _T	Site-specific SSL (mg/kg) at AF _T = 1	Site-specific SSL (mg/kg) at AF _T at D=53' x DAF
100-41-4	Ethylbenzene	7.00E-01	2.0E+02	5.19E-04	--	3.2E-01	2.53E-01	2.07E-01	1.44E+00	13	2.28E-01	6.12E+01
108-88-3	Toluene	1.50E-01	1.4E+02	5.19E-04	--	2.7E-01	2.53E-01	2.07E-01	1.44E+00	13	4.30E-02	1.16E+01
	1,1,1-Trichloroethane											
71-55-6	(1,1,1-TCA)	2.00E-01	1.4E+02	5.19E-04	--	7.1E-01	2.53E-01	2.07E-01	1.44E+00	13	7.01E-02	1.88E+01
79-01-6	Trichloroethylene	5.00E-03	9.4E+01	5.19E-04	--	4.2E-01	2.53E-01	2.07E-01	1.44E+00	13	1.42E-03	3.82E-01
1330-20-7	Xylene (total)	1.75E+00	2.0E+02	5.19E-04	--	3.0E-01	2.53E-01	2.07E-01	1.44E+00	13	5.64E-01	1.52E+02

Notes:

An SSL was not derived for chemicals that do not have promulgated primary MCLs. These chemicals were not included in the assessment of potential for groundwater degradation at concentrations greater than MCLs.

Initial SSL derived using EPA July 1996 Soil Screening Guidance: Technical Background Document, where SSL = MCL (K_{oc} * f_{oc} + (O_w + O_a)H'/P_b).

AF_{Tavg} calculated from LARWQCB May 1996 Interim Site Assessment and Cleanup Guidebook which accounts for attenuation in the soil assuming site-specific soil particle

distribution and distance between impacts and groundwater table of 53 feet, and default DAF for EPA SSLs of 20 as presented in EPA July 1996 Soil Screening Guidance: Technical Background Document which accounts for limited groundwater mixing.

AF_{Tavg} = Average attenuation factor based on site lithology (distance to groundwater = 53 feet, 30% sand, 57% silt, and 13% clay).

na = not available

K_{oc} = soil organic carbon-water partition coefficient (L/kg)

f_{oc} = site-specific organic carbon content of soil (kg/kg)

K_d = soil-water partition coefficient (L/kg), K_{oc} x f_{oc}

H' = dimensionless Henry's law constant

O_w = site-specific average water-filled porosity (by volume)

O_a = site-specific average air-filled porosity (by volume)

P_b = dry soil bulk density (kg/L)

⁽¹⁾ Obtained from EPA Region 9 preliminary remediation goal (PRG) physical-chemical data for volatile organic compounds, November 2000

⁽²⁾ Obtained from Risk Assessment Information System (RAIS) Toxicity & Chemical-Specific Factors Data Base, January 2001, http://risk.lsd.ornl.gov/cgi-bin/tox/TOX_select?select=csf

⁽³⁾ Site-specific average values

⁽⁴⁾ Obtained from EPA Soil Screening Guidance: Technical Background Document (TBD), EPA/540/R-95/128, July 1996, <http://www.epa.gov/oerrpage/superfund/resources/soil/toc.htm>

Geotechnical Parameters for the BRC Former C-6 Facility, Los Angeles, California

Sample ID	Date Sampled	Depth (feet bgs)	Sieve Analysis (Soil Type)	Dry Bulk Density (kg/L)	Moisture Content (percent by weight)	Total Porosity (fraction by volume)	Air-filled Porosity (fraction by volume)	Water-filled Porosity (fraction by volume)	TOC*	f _{oc} (fraction by weight)
EIA290176-001 (I-34-5)	1/29/2001	5	Silt	1.51	15.9	0.43	0.19	0.24	520	0.0005
EIA290176-010 (D-29-5)	1/29/2001	5	Silt	1.44	20.3	0.46	0.16	0.29	2350	0.0024
EIA29176-018 (I-25-5) Average	1/29/2001	5	Silt	1.34 1.43	17.8 18.0	0.49	0.26 0.20	0.24 0.26	690 1187	0.0007 0.0012
EIA290176-004 (I-34-20)	1/29/2001	20	Silt	1.54	17.5	0.42	0.15	0.27	330	0.0003
EIA290176-012 (D-29-20)	1/29/2001	20	Silt	1.55	17.0	0.41	0.15	0.26	430	0.0004
EIA29176-021 (I-25-20) Average	1/29/2001	20	Silt	1.37 1.49	20.2 18.2	0.48	0.20 0.17	0.28 0.27	410 390	0.0004 0.0004
EIA290176-007 (I-34-50)	1/29/2001	50	Fine sand	1.35	4.4	0.51	0.45	0.06	230	0.0002
EIA29176-015 (D-29-50)	1/29/2001	50	Fine sand	1.36	19.5	0.49	0.22	0.26	560	0.0006
EIA29176-024 (I-25-50) Average	1/29/2001	50	Silt	1.34 1.35	24.3 16.1	0.51 0.50	0.18 0.28	0.32 0.22	470 420	0.0005 0.0004

Weighted Fraction by weight (depths 12 to 65 feet bgs)

1.44

0.46

0.21

0.25

0.0005

The weighted fraction by weight assumes the 5-foot sample is representative of the top 20 feet, the 20-foot sample of depths between 20 and 50 feet, and the 50-foot sample of depths between 50 and 65 feet bgs.

Notes:

The laboratory report will be provided as an appendix of the Soil Assessment Report which is being prepared by Kennedy/Jenks, Inc. and will be submitted to the RWQCB under separate cover.

The air-filled porosity values were calculated from gravimetric data, not volumetric data.

* f_{oc} = the weight fraction of organic carbon in soil = TOC/1,000,000

Soil Particle Size Distribution for the BRC Former C-6 Facility, Los Angeles, California

Sample ID	Date Sampled	Depth (feet bgs)	Sieve Analysis (Soil Type)	Median Grain Size (mm)	Gravel	Particle Size Distribution, wt. Percent						Silt	Clay		
						Sand Size				TOTAL					
						Coarse	Medium	Fine							
EIA290176-001 (I-34-5)	1/29/2001	5	Silt	0.029	0.00	0.00	0.22	17.60	17.82	69.80	12.37				
EIA290176-010 (D-29-5)	1/29/2001	5	Silt	0.027	0.00	0.00	0.02	17.00	17.02	68.41	14.58				
EIA29176-018 (I-25-5)	1/29/2001	5	Silt	0.026	0.00	0.00	0.39	14.86	15.25	68.78	15.97				
Average									16.70	69.00	14.31				
EIA290176-004 (I-34-20)	1/29/2001	20	Silt	0.032	0.00	0.00	0.00	31.19	31.19	54.83	13.99				
EIA290176-012 (D-29-20)	1/29/2001	20	Silt	0.036	0.00	0.00	0.90	27.59	28.49	59.67	11.85				
EIA29176-021 (I-25-20)	1/29/2001	20	Silt	0.020	0.00	0.00	0.00	11.21	11.21	69.07	19.72				
Average									23.63	61.19	15.19				
EIA290176-007 (I-34-50)	1/29/2001	50	Fine sand	0.151	0.00	0.00	0.57	79.33	79.90	17.39	2.71				
EIA29176-015 (D-29-50)	1/29/2001	50	Fine sand	0.083	0.00	0.00	3.26	47.93	51.19	39.79	9.01				
EIA29176-024 (I-25-50)	1/29/2001	50	Silt	0.027	0.00	0.00	0.04	21.27	21.31	64.99	13.70				
Average									50.80	40.72	8.47				

Weighted Fraction by weight (depths 12 to 65 feet bgs)

0.30	0.57	0.13
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The weighted fraction by weight assumes the 5-foot sample is representative of the top 20 feet, the 20-foot sample of depths between 20 and 50 feet, and the 50-foot sample of depths between 50 and 65 feet bgs.